

ClinchRiverESPHFNPEm Resource

From: Fetter, Allen
Sent: Wednesday, October 18, 2017 10:56 AM
To: Schiele, Raymond Joseph
Cc: ClinchRiverESPSafNPEm Resource
Subject: Site Visit_CRNS_Jan 31 - Feb 1, 2018.docx
Attachments: Site Visit_CRNS_Jan 31 - Feb 1, 2018.docx

Hearing Identifier: ClinchRiver_ESP_HF_NonPublic
Email Number: 214

Mail Envelope Properties (Allen.Fetter@nrc.gov20171018105500)

Subject: Site Visit_CRNS_Jan 31 - Feb 1, 2018.docx
Sent Date: 10/18/2017 10:55:46 AM
Received Date: 10/18/2017 10:55:00 AM
From: Fetter, Allen

Created By: Allen.Fetter@nrc.gov

Recipients:

"ClinchRiverESPSafNPEm Resource" <ClinchRiverESPSafNPEm.Resource@nrc.gov>

Tracking Status: None

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Tracking Status: None

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Files	Size	Date & Time
MESSAGE	0	10/18/2017 10:55:00 AM
Site Visit_CRNS_Jan 31 - Feb 1, 2018.docx		43329

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**NRC Management Visit to TVA Knoxville Office Complex and
Clinch River Nuclear Site, Oak Ridge, Tennessee**

APPLICANT: Tennessee Valley Authority (TVA)

DATES: January 31 – February 1, 2018

LOCATIONS: TVA Knoxville Office Complex
400 West Summit Hill Drive
Knoxville, Tennessee 37902

Clinch River Nuclear Site
Oak Ridge, Tennessee

NRC Participants: Vonna Ordaz, Office Director (NRO)
Robert Taylor, Director (NRO/DSEA)
Anna Bradford, Deputy Director (NRO/DNRL)
Joseph Collacino, Branch Chief (NRO/DNRL/LB3)
Michael Dudek, Branch Chief (NRO/DSEA/RGS)
Gerry Stirewalt, Geologist (NRO/DSEA/RGS)
Olivier Lareynie, NRO Foreign Assignee (NRO/DSEA/RGS)

PROJECT MANAGER: Allen Fetter (NRO/DNRL/LB3)

BACKGROUND

Tennessee Valley Authority (TVA) submitted an Early Site Permit (ESP) application for Clinch River Nuclear Site (CRNS) to the U.S. Nuclear Regulatory Commission (NRC) on May 12, 2016. The NRC staff accepted the application for docketing and detailed technical review on December 30, 2016. NRC issued a schedule letter to TVA on March 17, 2017 and the major public milestones for the review are listed in the table below.

Safety Review	
Phase A – Preliminary Safety Evaluation Report (PSER) and Requests for Additional Information (RAIs) Issued	08/04/2017
Phase B – Advanced Safety Evaluation (SE) with No Open Items Developed	10/20/2018
Phase C – ACRS Review and Meetings on Advanced SE	03/26/2019
Phase D – Final Safety Evaluation Report Issued	08/17/2019
Environmental Review	
Phase 1 – Scoping Summary Report Issued	11/02/2017

*Includes stops at several site geologic features and a look at representative rock core samples

Phase 2 – Draft Environmental Impact Statement (EIS) Issued	06/01/2018
Phase 3 – Responses to DEIS Public Comments Completed	01/20/2019
Phase 4 – Final EIS Issued	06/21/2019

In conjunction with the information session, which will take place at the TVA Knoxville Office, most members of the NRC staff will visit the CRN Site and surrounding area in an effort to become familiar with the site layout, the surrounding geologic and tectonic features, as well as physiography.

ACTIVITIES AND SCHEDULE

TVA provide an overview of the Clinch River ESP application to NRC management and staff at its Knoxville Office Complex prior to visiting the CRN Site. Activities will take place over a period of two business days, January 31 and February 1, 2018.

An agenda for the visit is presented in Attachment A.

**Agenda: January 30 – February 2, 2018
TVA Knoxville Office, Knoxville, Tennessee
TVA Clinch River Nuclear Site (CRNS), Oak Ridge, Tennessee**

Tuesday, January 31, 2018, MORNING SESSION (TVA Knoxville Office):

- 08:30-08:45** Welcome and Introductions [NRC/TVA]
- 08:45-09:30** Overview Presentation of Clinch River ESPA [TVA]
- 09:45-10:00** Tour of TVA’s River Forecast Center [NRC/TVA]
- 12:00-13:00** **Lunch**

Tuesday, January 31, 2018, AFTERNOON SESSION (TVA CRNS)

- 13:00-16:30** Site Tour of Clinch River Nuclear Site*..... [NRC/TVA]
- 16:30-16:45** Debrief Summary..... [NRC/TVA]
- 17:00** **Adjourn**

Wednesday, February 1, 2018, MORNING SESSION (TVA CRNS)

- 09:00-12:15** Site Tour (examinations of cores/samples, area/vicinity geologic features²)
[NRC/TVA]
- 12:15-13:00** **Lunch**

Wednesday, February 1, 2018, AFTERNOON SESSION: (TVA CRNS)

- 13:00-16:30** Site Tour (area/vicinity geologic features continued)..... [NRC/TVA]

*Includes stops at several site geologic features and a look at representative rock core samples

Attachment A

16:30-16:45 Debrief Summary.....[NRC/TVA]

17:00 **Adjourn**

Geologic Features and Samples

Field trip to visit features described in SSAR text or illustrated in SSAR figures:

1. Visit the surface projection location of Shear Fracture Zone on site (Figure 2.5.1-65) and across the river if that location is accessible and currently exposed as indicated in CNL-16-162, p E1-36.
2. Visit location of Chestnut Ridge and Copper Creek faults in site location.
3. Visit Quaternary deposits and landforms (terraces) in site area.
4. Visit 2 Sinkhole clusters on site (northern boundary) and to the SE (as indicated on fig 2.5.1-46)
5. Visit pinnacle and cutter exposure near Copper Ridge Cave (fig 2.5.1-40), an abandoned phreatic cave within site area. Visit both the hillside exposure and the cave.

Examine specific core for:

1. Examples of shear fracture zone and other fracture zones (to distinguish the difference between shear fracture zones from fracture zones) in boreholes: 21 ft. in **MP 423** (718-697 ft. elev, runs 13,14,15,16,17,18); 18 and 6 ft in **MP 201** (644-626 ft elev, runs 27,28,29,30) and (497-491 ft elev, runs 56 & 57)); and 6 ft in **MP 101** (553-547 ft elev, runs 47, 48)
2. Examples of Knox unconformity (Blackford/Knox contact) from borehole **MP 201**, suggested 305-315 ft depth, and **MP 423** suggested 275-280 ft depth, based on information in ESP SSAR Table 2.5.1-2